

96197

Work Order ID 86863

86863

Page 1

July-06-12 3:17:26 PM

Item ID: D3304-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Tube Assembly

Start Date: 7/06/12 Start Qty: 8.00

8

Cust Item ID:

Required Date: 8/17/12 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan: 12/1Date: 12-07-10

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3304

Rev B

100

0.00

100

BAND SAW

Bandsaw

Memo

Jeaspa Bandsaw

Cut to length

0.00

12-08-09

8

110

0.00

110

CONVENTIONAL LATHE

Lathe Conv

Memo

Conventional Lathe

Cut blank: 15.75" as per Dwg D3304 Turn as per Dwg D3304 Identify as D3304-1

0.00

12-08-09

8

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

Quality Control

0.00

12-08-09

8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86863

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Page 2

Item ID: D3304-041 Accept ***N900040100*** Setup Start ***NS1***
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 Item Name: Tube Assembly
 Start Date: 7/06/12 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 8/17/12 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00	SL	12-08-10		②			
140 *140* Small Fab Small Fab	Small Fab Memo Debur	0.00 0.00				8	0		FF 12-09-12
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	JMB 12-9-13			8			DAS 16 17/09/13

W/O:		WORK ORDER CHANGES					
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 Item Name: Tube Assembly
 Start Date: 7/06/12 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 8/17/12 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Large Fab	Large Fab	0.00				8			12-09-26 JBL
Large Fab	Memo	0.00							
Large Fab	Weld bracket as per Dwg D3304 and QSI 004								
	M122357								
170 *170* QC	QC9- Inspect visual per QSI004- Fusion Welds	0.00				8x			
Quality Control	Memo	0.00							
180 *180* QC	QC5- Inspect part completeness to step on W/O	0.00				8			
Quality Control	Memo	0.00							

DAS 24 8-8 12.9.26

Smb 12-9-27
 DAS 16 8-8 12/9/27

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 86863

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Page 4

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Item ID: D3304-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Tube Assembly

Start Date: 7/06/12

Start Qty: 8.00

8

Cust Item ID:

Required Date: 8/17/12

Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

190

Powdercoat

Powder Coating

Memo

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

0.00

10:15
3200F
10:45

8X4

MA
12/10/03

200

QC3- Inspect Part Finish

0.00

200

QC

Quality Control

Memo

0.00

8 x 4 U 11/10/03

210

Small Fab

0.00

210

Small Fab

Small Fab

Memo

Assemble lanyard and pip pin as per Dwg D3304

0.00

8 0 12-10-04

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 5

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 Start Date: 7/06/12 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 8/17/12 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220 *220* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	Smb 12.0.04	DA 1	17/10/14	8			
230 *230* Packaging Packaging	Identify as per dwg & Stock Location: <u>ST 186</u> Memo	0.00 0.00				8k		SP 12-10-5	
240 *240* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00						12/10/5 ME 12-10-05	

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

July-06-12 3:17:25 PM

Page 1

Work Order ID: 86863
Parent Item: D3304-041
Parent Item Name: Tube Assembly

Start Date: 7/06/12
Start Qty: 8.00

Required Date: 8/17/12
Required Qty: 8.00

Comments: IPP: C04.11.17Step 13 revisedKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
BLBS-0016 PIP PIN		Purchased	No			210	Each	19.0000	1	8	(8)	FF 12-10-04	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST283	122406	9				4			
					113565	9							
				ST284		10							
					122190	10				4			
CBL-1240 Cable		Purchased	No			100	f	776.2792	1.0417	8.3336	(8)	FF 12-10-04	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				GA		776.279191							
					113565	3.911789							
					119021	259.334002				8.3336			
					119690	13.0334							
					122190	500							
CBL-460 Loop Sleeve		Purchased	No			210	Each	578.0000	2	16	(8)	FF 12-10-04	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				GA		578							
					121574	578				16			
D3304-5 Bracket		Manufactured	No			210	Each	19.0000	1	8		12-09-26	JBL
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA022		19							
					54570	19				8			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

July-06-12 3:17:26 PM

Page 2

Work Order ID: 86863

Parent Item: D3304-041

Parent Item Name: Tube Assembly

Start Date: 7/06/12

Required Date: 8/17/12

Start Qty: 8.00

Required Qty: 8.00

M304TR0.875W.065

Purchased

No

160 f

47.0000

1.3437

11.315369

304 round tube .875 x .065w

Location

Loc Qty

Loc Code

MAT017

47

110680

7

121317

40

11.5 12-08-09

July-06-12 3:17:26 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

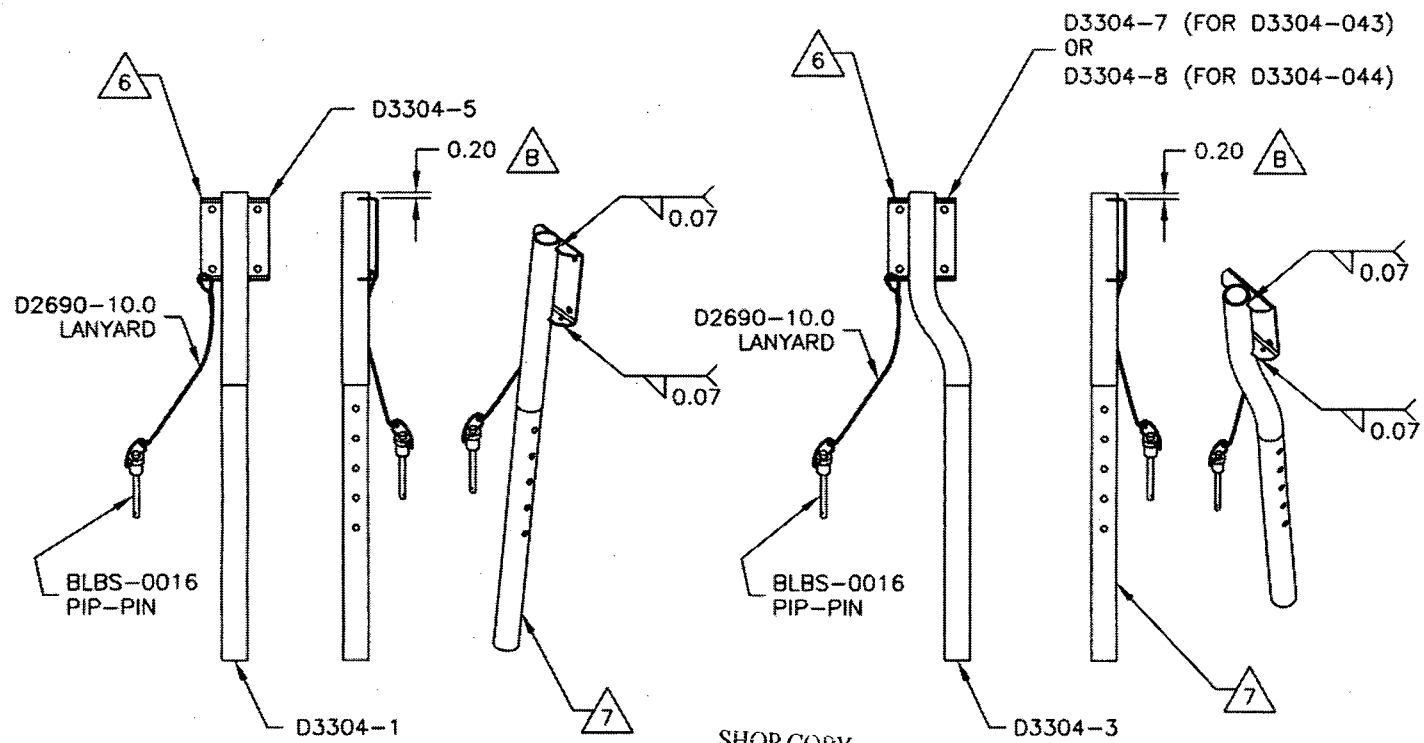
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
0								

NOTE: Date & initial all entries

DART

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DESIGN	RF	DRAWN BY	RF	DRAWING NO.	REV. B
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	D3304	SHEET 1 OF 4
DATE	05.07.15	TITLE	TUBE ASSEMBLY	SCALE	1:6
A	04.08.18	NEW ISSUE			
B	05.07.15	UPDATE DIMENSIONS: ADD D3304-7/-8			



D3304-041 TUBE ASSEMBLY

**D3304-044 TUBE ASSEMBLY (SHOWN)
D3304-043 OPPOSITE**

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *96263* *PL/20710*

D3304-041/-043/-044 NOTES:

- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6), PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

RELEASED
05.08.11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

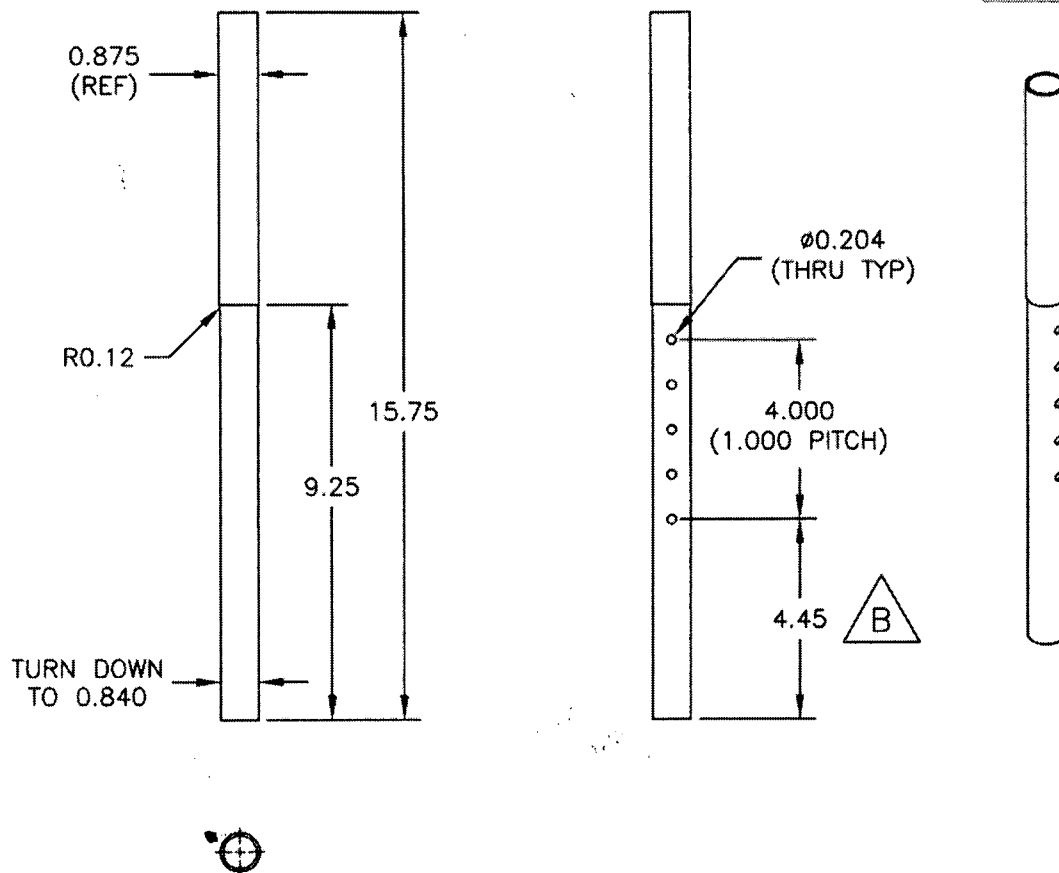
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 2 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

**D3304-1 TUBE****D3304-1 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

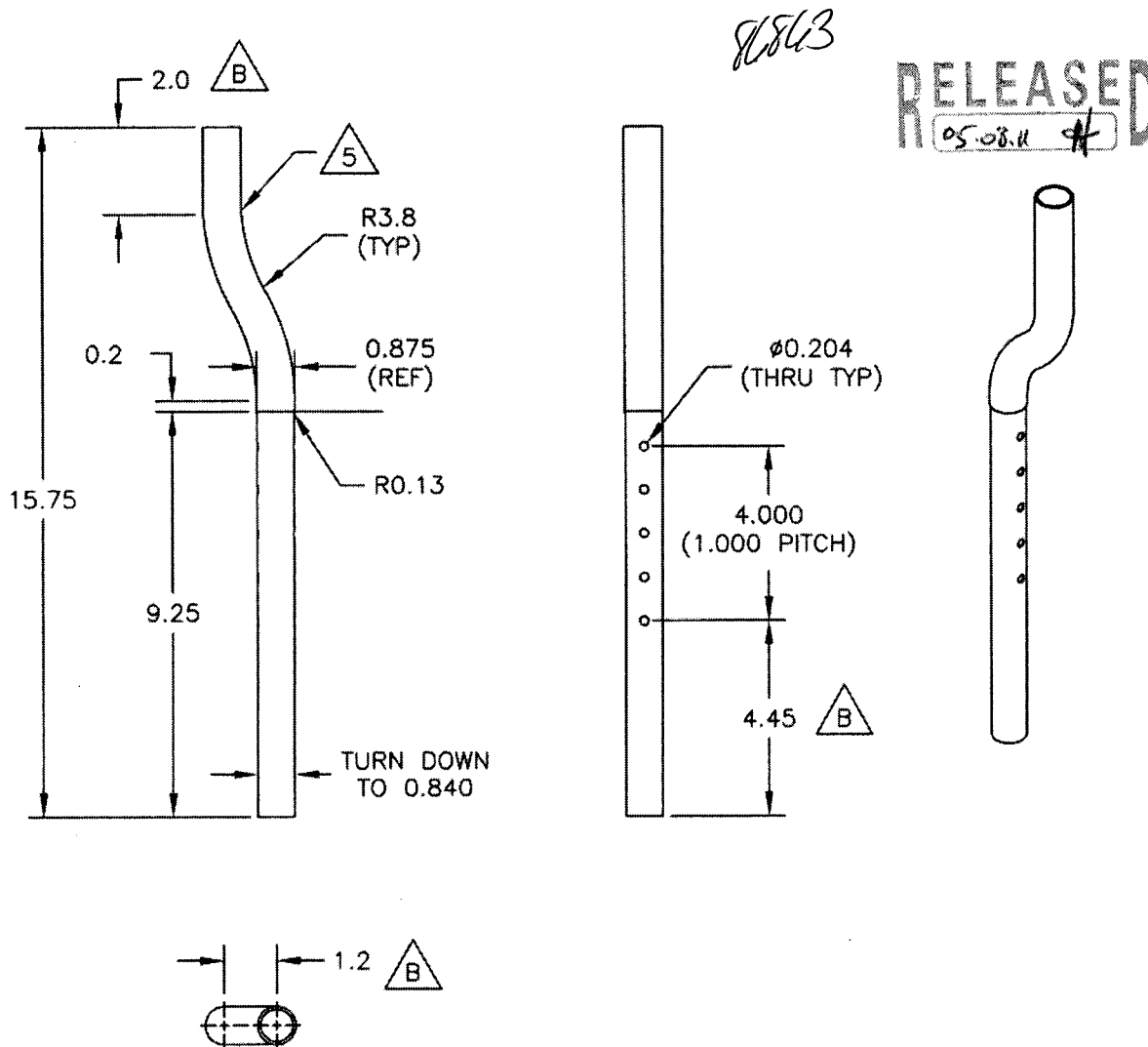
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4



D3304-3 TUBE

D3304-3 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL
(REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

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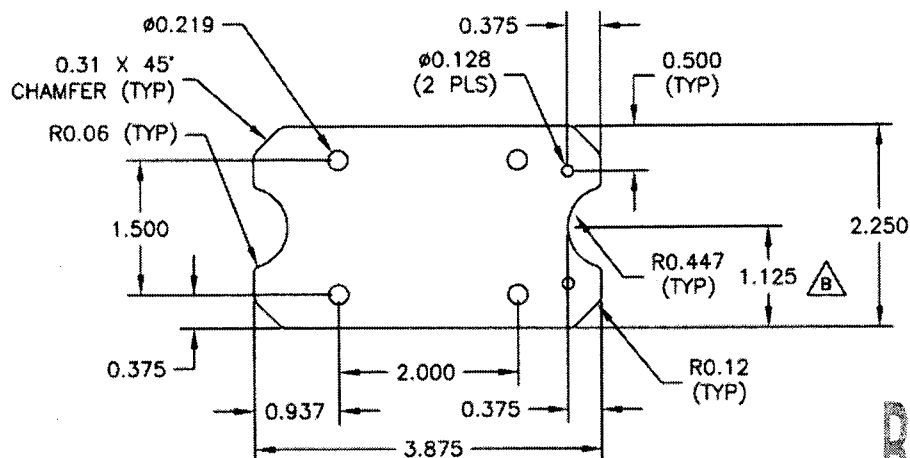
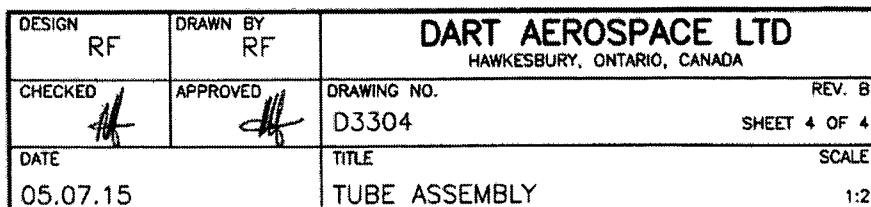
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

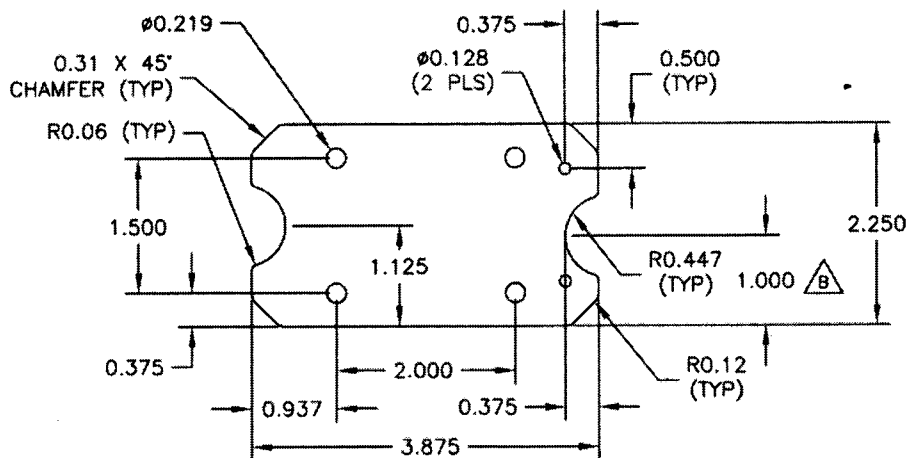
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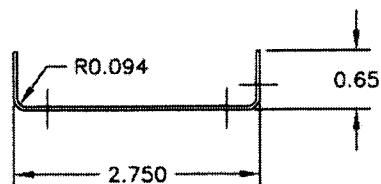
NOTE: Date & initial all entries



D3304-5 FLAT PATTERN



D3304-7/-8 FLAT PATTERN



D3304-5/-7 BRACKET
D3304-8 OPPOSITE

1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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